

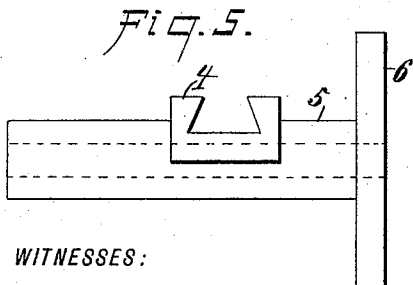
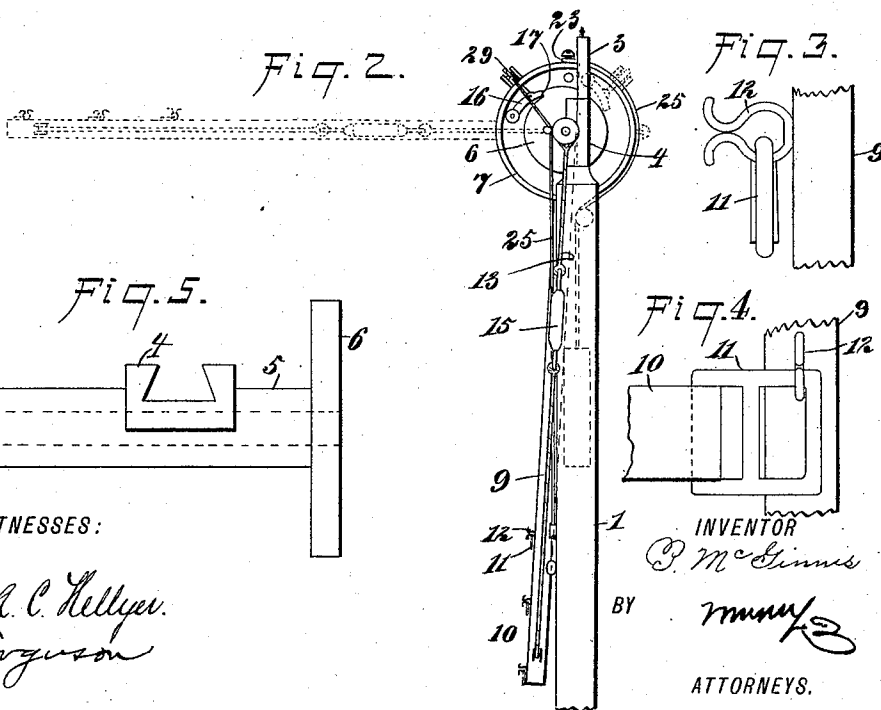
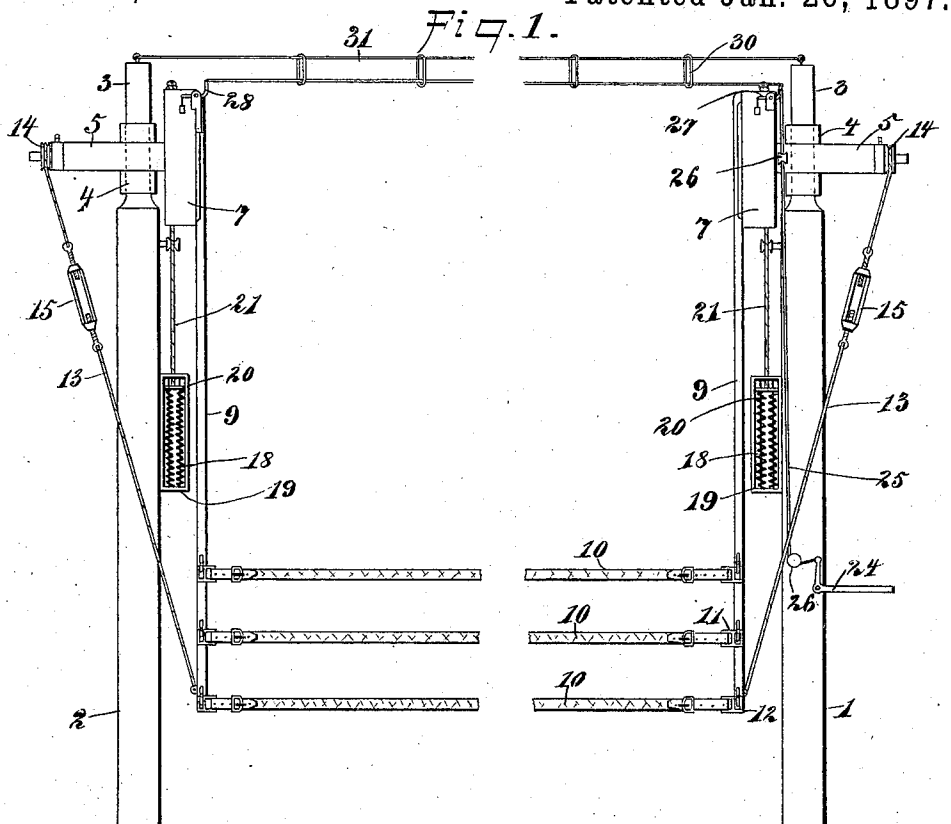
(No Model.)

2 Sheets—Sheet 1.

P. McGINNIS.
STARTING GATE FOR RACE TRACKS.

No. 575,931.

Patented Jan. 26, 1897.



WITNESSES:

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(No Model.)

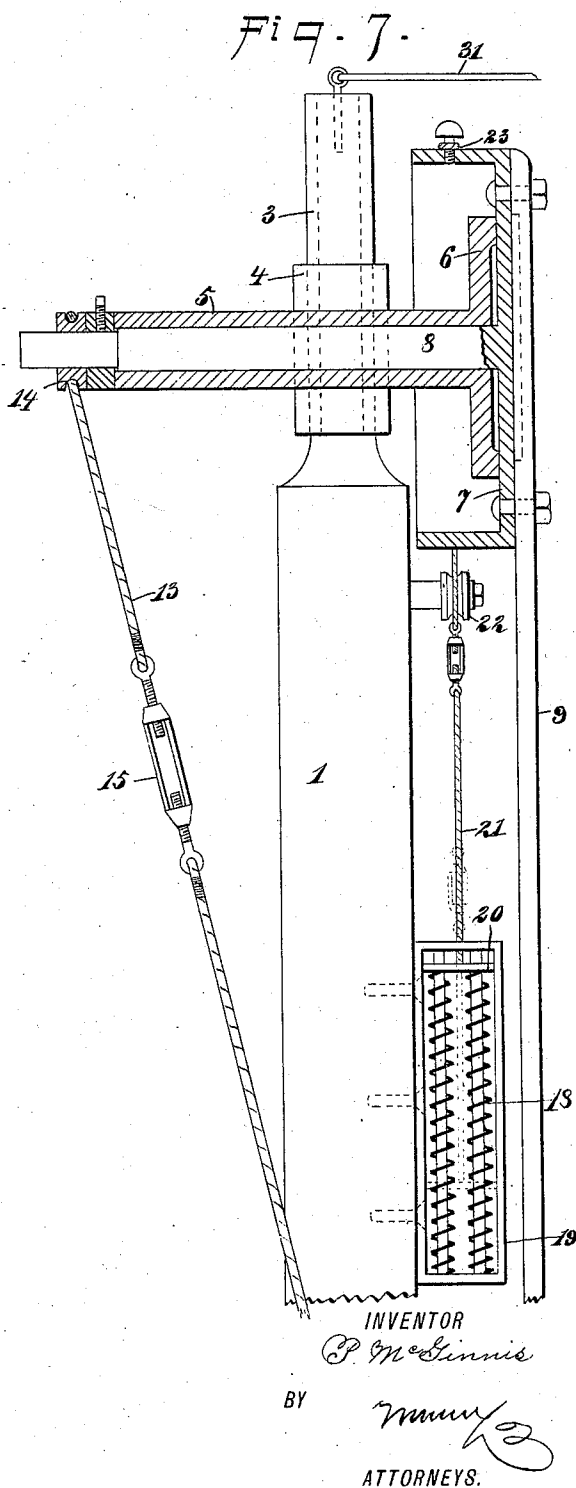
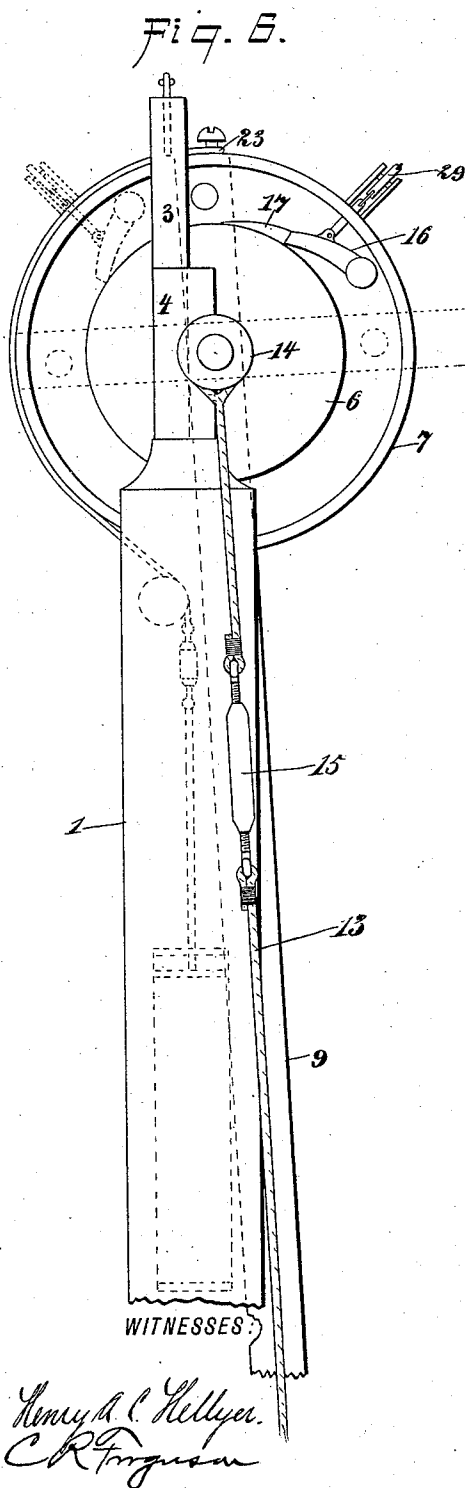
2 Sheets—Sheet 2.

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STARTING GATE FOR RACE TRACKS.

No. 575,931.

Patented Jan. 26, 1897.



UNITED STATES PATENT OFFICE.

PHILIP MCGINNIS, OF BROOKLYN, NEW YORK.

STARTING-GATE FOR RACE-TRACKS.

SPECIFICATION forming part of Letters Patent No. 575,931, dated January 26, 1897.

Application filed April 23, 1896. Serial No. 588,746. (No model.)

To all whom it may concern:

Be it known that I, PHILIP MCGINNIS, of Brooklyn, in the county of Kings and State of New York, have invented new and useful
5 Improvements in Starting-Gates for Race-Tracks, of which the following is a full, clear, and exact description.

This invention relates to devices for alining and holding horses in proper position for
10 starting on race-tracks.

Heretofore in devices for this purpose difficulty has been found in the fact that the arms supporting the gate or barrier are drawn inward by pressure of their ends, thus rendering the device hard to operate or slow to respond to operating mechanism.
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The object, therefore, of my invention is to provide a gate of very rigid construction and of easy operation, and, further, so to connect the barrier-strips to the arms that they may be easily separated from the supporting-arms should a horse run against them.

I will describe a starting-gate embodying my invention and then point out the novel
25 features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

30 Figure 1 is a front elevation of a gate embodying my invention. Fig. 2 is a side elevation thereof. Fig. 3 is a side view of a barrier-holding device employed. Fig. 4 is a front view thereof. Fig. 5 is a top view of a bearing for the gate-arms. Fig. 6 is an elevation showing the operating devices on an enlarged scale, and Fig. 7 is a vertical section thereof.

The starting-gate comprises posts 1 2, designed to be arranged at opposite sides of the track and securely fastened in the ground.
40 The upper end of each post is provided with a reduced portion or extension 3, adapted to receive a bracket 4, to which a transversely-extending sleeve 5 is attached. The bracket 4 is provided with a dovetailed slot or opening designed to pass over the extension 3, which is correspondingly shaped, so that these parts may be easily removed from the posts when desired. The sleeves 5 are provided on their
50 inner ends with flanges 6, which bear upon the inner surface of carriers 7, having shafts 8 extended through the sleeves.

The carriers 7 are herein shown as circular, and to the inner side of each carrier is rigidly secured the upper end of an arm 9. When in their lowered positions, these arms 9 extend nearly to the track, and to the lower ends of these arms barriers 10 are attached. These barriers preferably consist of flexible material, such, for instance, as leather, and to prevent the breaking of the arms by the possible or accidental pressure of a horse against the barriers I provide means by which said barriers may be easily detached from the arms by such pressure.
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As here shown, the ends of the barriers are provided with metal loops 11, engaged in spring-metal clips 12, attached to the arms. These clips 12 each comprise two arms curved to form a ring portion to receive the loop and having their ends converging substantially to a meeting point. Obviously when pressure is brought to bear upon a barrier the loop 11 may be forced outward between the two arms of the clip, which will yield sufficiently to allow the passage thereof.
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Each arm 9 has an outside lateral brace consisting of a wire or rod 13, extended from the lower end of the arm to a connection with a grooved collar 14, mounted on the outwardly-extended portion of the shaft 8. The braces 13 may be provided with turnbuckles 15 for adjusting their tension.
80

I will now describe means for releasing and automatically raising the gate or barrier to start the horses. Within each carrier 7 is pivoted a dog 16, adapted to engage with its free end against a lug 17 on the periphery of the flange 6, to hold the gate or barrier in its downward position against the resistance of the counterbalance designed to raise the gate or barrier when said dogs are released from the lugs.
90

The counterbalance employed herein consists of springs 18, arranged in casings 19, attached to the inner sides of the posts 1 2. These springs 18 are coiled around rods secured vertically in the casings, the lower ends of the springs being attached to the lower ends of the rods or to the lower portions of the casings and their upper ends connected to blocks 20, designed to slide on the rods. From the blocks 20 flexible connections 21 extend upward around pulleys 22, mounted
100

on the posts 1 2, to a connection at their upper ends with the carriers 7, as shown at 23. These flexible connections 21 may be provided with turnbuckles, as indicated in the drawings.

Pivoted on the post 1 is an angle-lever 24, from one arm of which a wire 25 extends around a pulley 26 on the post and upward to a connection with a bell-crank lever 27, pivoted on the carrier 7 adjacent to the post 1. The wire 25 also extends to a connection with a bell-crank lever 28, pivoted on the opposite carrier 7. From the bell-crank levers 27 28 link connections 29 extend through the carriers 7 and engage with the dogs 16. The portion of the wire 25 which extends across the track may be supported by loops 30, depending from a wire 31, having its ends attached to the upper ends of the opposite posts 1 2.

It may be here stated that I do not limit myself to the above-described connections for releasing the dogs 16 from the lugs 17, as such connections obviously may be extended underneath the track or underneath the ground at the side of the track to the starter's box.

In operation, when the barrier or gate is in its downward position the horses in a race will be alined against the same, and then at the proper time the starter, by pushing downward on the lever 24, will release the dogs 16 from the lugs 17, and then the counterbalance devices will immediately swing the arms upward to the position indicated in dotted lines in Fig. 2.

Suitable ropes may be attached to the gate or barrier for drawing it downward when so desired.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A starting-gate for race-tracks, comprising posts located at opposite sides of the track, bearing-sleeves removably mounted on the

upper ends of said posts and having flanges at their inner ends, carriers having shaft portions extended through the sleeves, detents between the flanges and carriers, means for releasing the detents, arms mounted on the said carriers, barriers secured to the free ends of the arms, and lateral braces extended from the ends of the arms to a connection with the shafts of the carriers, substantially as specified.

2. A starting-gate for race-tracks, comprising side posts located at opposite sides of the track, bearing-sleeves having removable connection with the upper ends of the posts and extended transversely thereof, flanges on the inner ends of the sleeves, carriers having a bearing against said flanges and provided with shafts extended through the sleeves, arms extended from the carriers, lateral braces for said arms, barriers connected with the arms, a counterbalance for the arms, a connection between said counterbalance and the carriers, a detent between the carriers and the flanges on the sleeves, and means for releasing said detents, substantially as specified.

3. A starting-gate for race-tracks, comprising posts located at the sides of the track, sleeves mounted transversely on said posts, flanges on the inner ends of said sleeves, carriers having shaft portions extended through the sleeves and adapted to rotate therein, dogs pivoted to the inner sides of the carriers, lugs on the periphery of the flanges adapted to be engaged by said dogs, pull-wires having connection with said dogs, ropes or wires having connection at one end with the carriers and at the other end with spring-counterbalances, lateral braces on the arms, and barriers supported on the arms, substantially as specified.

PHILIP MCGINNIS.

Witnesses:

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